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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,801	03/29/2004	Boris Ginzburg	P-6390-US	9735

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EXAMINER	
SAMS, MATTHEW C	
ART UNIT	**PAPER NUMBER**
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/810,801	GINZBURG ET AL.	
	Examiner	Art Unit	
	Matthew C. Sams	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1, 11 and 39 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. Claims 1, 11 and 39 fails to comply with the subject matter eligibility requirement of 35 U.S.C. § 101 because it fails to be a practical application that produces a useful, tangible and concrete result.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 11, 23, 28 and 34 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 10, 24 and 17 of copending Application No. 2005/0041616. Although the conflicting claims are not identical, they are not patentably distinct from each other as seen in the example listed below. (The instant claims are broader in scope and thus encompass the claims of the other invention.)

10/810,801	10/644,823
Claim 23: An apparatus comprising: a controller to activate a hidden node protection mechanism based on nodes report.	Claim 10: An apparatus comprising: a threshold adapter to enable and/or disable a packet protection mechanism based on a value of an adaptable threshold, wherein the value of the adaptable threshold is determined from a collision rate of packets transmitted over a wireless local area network.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Objections

5. Claim 31 is objected to because of the following informalities: "is able" is repeated. Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or

> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3, 5, 9-12, 14, 16, 18, 20, 21, 23, 24, 26, 28, 29, 31, 32, 34, 35, 37, 39 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Ginzburg et al. (US 2005/0041616 hereafter, Ginzburg)

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, Ginzburg teaches a method comprising detecting a hidden node in a wireless communication system by analyzing a nodes report received from a subset of nodes. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 3, Ginzburg teaches detecting an unreported node and activating a hidden node protection on a reporting node. (Page 2 [0019])

Regarding claim 5, Ginzburg teaches enabling RTS/CTS control mechanisms. (Page 1 [0001-0002])

Regarding claim 9, Ginzburg teaches generating a hidden nodes list based on reports received from the subset of nodes. (Page 2 [0020])

Regarding claim 10, Ginzburg teaches marking a node on the hidden nodes list as a hidden node and activating a hidden node protection mechanism on the marked nodes. (Page 2 [0020])

Regarding claim 11, Ginzburg teaches activating a hidden node protection mechanism based on a received nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 12, Ginzburg teaches receiving a request to generate a nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 14, Ginzburg teaches enabling a RTS/CTS control mechanism. (Page 1 [0001-0002])

Regarding claim 16, Ginzburg teaches a hidden node detector to detect a hidden node in a wireless communication system based on a nodes report generated from a received nodes report received from a subset of nodes. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 18, Ginzburg teaches a controller to activate a hidden node protection mechanism. (Fig. 2 [250, 260, 270 & 280])

Regarding claim 20, Ginzburg teaches a hidden node detecotor is able to detect a hidden node by detection of an unreported node at the nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 21, Ginzburg teaches the hidden node protection mechanism comprises an RTS/CTS control mechanism. (Page 1 [0001-0002])

Regarding claim 23, Ginzburg teaches a controller to activate a hidden node protection mechanism based on the nodes report. (Fig. 2 [250, 260, 270 & 280])

Regarding claim 24, Ginzburg teaches a nodes report generator to generate the nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 26, Ginzburg teaches a hidden node protection mechanism comprises a RTS/CTS control mechanism. (Page 1 [0001-0002])

Regarding claim 28, Ginzburg teaches a wireless communication system (Fig. 1 [100]) comprising a station (Fig. 1 [120, 130 & 140]) to generate a nodes report of nodes of the wireless communication system and an access point (Fig. 1 [110]) to detect a hidden node by analyzing properties of the nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 29, Ginzburg teaches an access point is able to activate a hidden node protection mechanism to protect the station from transmissions of the hidden node. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 31, Ginzburg teaches the access point is able to detect a hidden node by detection of an unreported node at the nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 32, Ginzburg teaches a hidden node protection mechanism comprises a RTS/CTS control mechanism. (Page 1 [0001-0002])

Regarding claim 34, Ginzburg teaches an apparatus comprising a dipole antenna to receive a hidden node protection command (Page 2 [0017]) and a

controller to activate a hidden node protection mechanism based on the hidden node protection command. (Fig. 2 [250, 260, 270 & 280] and Page 2 [0016-0020])

Regarding claim 35, Ginzburg teaches a nodes report generator to generate a nodes report. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020] and Fig. 2 [250, 260, 270 & 280])

Regarding claim 37, Ginzburg teaches a hidden node protection mechanism comprises a RTS/CTS control mechanism. (Page 1 [0001-0002] and Page 2 [0016, 0019 & 0020])

Regarding claim 39, Ginzburg teaches an article comprising a storage medium having instructions stored thereon, when executed results in detecting a hidden node at a wireless communication system by analyzing a nodes report received from a subset of nodes. (Fig. 2 and Page 1 [0001-0002] and Page 2 [0016-0020])

Regarding claim 41, Ginzburg teaches detecting an unreported node and activating a hidden node protection on a reporting node. (Page 1 [0001-0002] and Page 2 [0016-0020])

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 2, 4, 6-8, 15, 17, 22, 27, 33, 38, 40 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzburg in view of Larsson (US-6,798,765).

Regarding claim 2, Ginzburg teaches the limitations of claim 1 above, but differs from the claimed invention by not explicitly reciting sending a request to generate the nodes report.

In an analogous art, Larsson teaches a method for forwarding in multi-hop networks that includes sending a request to generate a nodes report. (Col. 24 lines 4-12) At the time the invention was made, it would have been obvious to one of ordinary skill in the art would have been motivated to implement the wireless communication system of Ginzburg after modifying it to incorporate the request generator for a nodes report of Larsson. One of ordinary skill in the art would have been motivated to do this since requesting a node report makes the base station aware of potential sources of interference that are within broadcast range but not currently in communication with the base station.

Regarding claim 4, Ginzburg in view of Larsson teaches detecting a signal strength below or equal to a threshold and activating hidden node protection on a reporting node. (Larsson Col. 9 lines 18-35)

Regarding claim 6, Ginzburg in view of Larsson teaches sending a subset of power adjustment commands to a subset of nodes based on the nodes report. (Larsson Col. 4 lines 37-67)

Regarding claim 7, Ginzburg in view of Larsson teaches enabling a RTS/CTS control mechanism. (Ginzburg Page 1 [0001-0002])

Regarding claim 8, Ginzburg in view of Larsson teaches sending a subset of power adjustment commands to a subset of nodes based on the nodes report. (Larsson Col. 4 lines 37-67)

Regarding claim 15, Ginzburg in view of Larsson teaches adjusting a transmitted power level. (Larsson Col. 4 lines 37-67)

Regarding claim 17, Ginzburg in view of Larsson teaches a transmitter to send a request to generate the received nodes report. (Ginzburg Fig. 2 [220] & Larsson Fig. 6 [TX])

Regarding claim 22, Ginzburg in view of Larsson teaches the hidden node protection mechanism comprises a transmitted power control mechanism that includes a subset of desired transmitted power levels related to the subset of nodes. (Larsson Col. 4 lines 37-67)

Regarding claim 27, Ginzburg in view of Larsson teaches a hidden node protection mechanism comprising a power controller to adjust a power level of a transmitter according to a received power level. (Ginzburg Page 1 [0001-0002], Page 2 [0016, 0019 & 0020] and Larsson Col. 4 lines 37-67)

Regarding claim 33, Ginzburg in view of Larsson teaches the hidden node protection mechanism comprises a transmitted power control mechanism that includes a subset of desired transmitted power levels related to the subset of nodes. (Ginzburg Page 1 [0001-0002], Page 2 [0016, 0019 & 0020] and Larsson Col. 4 lines 37-67)

Regarding claim 38, Ginzburg in view of Larsson teaches a hidden node protection mechanism comprises a power controller to adjust a power level of a transmitter according to a received power level. (Ginzburg Page 1 [0001-0002], Page 2 [0016, 0019 & 0020] and Larsson Col. 4 lines 37-67)

Regarding claim 40, the limitations of claim 40 are rejected as being the same reason set forth above in claim 2.

Regarding claim 42, Ginzburg in view of Larsson teaches detecting a signal strength below or equal to a threshold and activating a hidden node protection mechanism on a reporting node. (Larsson Col. 9 lines 18-35)

10. Claims 13, 19, 25, 30 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ginzburg in view of Gillies et al. (US 2005/0180356 hereafter, Gillies).

Regarding claim 13, Ginzburg teaches a list of nodes that are hidden (Fig. 2 [280 & 285]), but differs from the claimed invention by not explicitly reciting the list includes the received signal strength indicator for the nodes.

In an analogous art, Gillies teaches generating the relative signal strength for different channels before broadcasting. (Pages 3-4 [0050-0054]) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the communication system of Ginzburg after modifying it to incorporate the signal strength determination of Gillies. One of ordinary skill in the art would have been motivated to do this since if the signal strength of a mobile device is below a threshold, then the mobile device is a prime candidate

to be a source of interference and to require the use of RTS/CTS message protection.

Regarding claim 19, Ginzburg in view of Gillies teaches a hidden node detector is able to detect hidden nodes by analyzing reported signal strength of a node. (Ginzburg Page 1 [0001-0002], Page 2 [0016, 0019 & 0020] and Gillies Pages 3-4 [0050-0054])

Regarding claim 25, Ginzburg in view of Gillies teaches generating a nodes report that comprises a table that includes at least a received signal strength indicator for subset of nodes. (Ginzburg Page 1 [0001-0002], Page 2 [0016, 0019 & 0020], Fig. 2 [285] and Gillies Pages 3-4 [0050-0054])

Regarding claim 30, Ginzburg in view of Gillies teaches the access point is able to detect a hidden node by analyzing a reported signal strength indicator of a node at the nodes report. (Ginzburg Page 1 [0001-0002], Page 2 [0016, 0019 & 0020], Fig. 2 [285] and Gillies Pages 3-4 [0050-0054])

Regarding claim 36, the limitations of claim 36 are rejected as being the same reason set forth above in claim 25.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MCS
5/12/2006

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